

# The Relationship Between Organizational Culture and Work Engagement: A Multilevel Investigation

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## Table of Contents

<b>Abstract</b> .....	1
<b>Introduction</b> .....	2
<b>Theory</b> .....	3
Work engagement .....	3
<i>Drivers of work engagement</i> .....	4
Organizational culture .....	6
<i>The competing values framework</i> .....	7
<i>Culture's relationship with employee attitudes and behavior</i> .....	9
The culture-engagement link .....	10
<b>Method</b> .....	13
Sample and procedure .....	13
Measures .....	14
Statistical analyses .....	15
<b>Results</b> .....	17
Descriptive statistics .....	17
Multilevel analysis .....	19
<b>Discussion</b> .....	23
Limitations and future research .....	28
Implications for practice .....	30
<b>Conclusion</b> .....	30
<b>References</b> .....	32

## **Abstract**

A better understanding of the broader factors that impact on work engagement is required in order to understand how the organizational context influences work engagement. However, knowledge of broader contextual predictors of work engagement is scarce. Using a multilevel framework, this study examined the role of four organizational culture types in facilitating work engagement of employees. Based on the organizational culture literature and work engagement research, it was assumed that the relationship between organizational culture and work engagement would differ depending on culture type. Organizational culture was measured in 35 Norwegian organizations, whereas work engagement was measured on 463 employees working in these organizations. Applying multilevel methods the hypothesized relationships were statistically tested. The study found partly significant results for a positive relationship between the clan culture type and work engagement. There was however no support for the hypothesized relationship between the other three culture types and work engagement. The findings indicate that clan culture is a moderate predictor of work engagement, although results are unclear about how strong this relationship is. Based on the results, there is reason to suggest that the relationship between organizational culture and work engagement is potentially more complex than assumed in this paper. Future research should make efforts to include mediating variables when studying the relationship between the two concepts. Limitations and implications for practice are discussed.

## **Introduction**

In the context of work, human capital is the resource that is involved in making the important decisions, developing the innovative products, building customer relationships, and winning contracts. Being a highly dynamic and non replicable resource, most managers would agree that employees can make a critical difference when it comes to innovation, competitive power, delivering high quality service, and ultimately effect the overall success of a business (Bakker & Schaufeli, 2008; Goodman, Zammuto, & Gifford, 2001). As such, organizations are depending on having employees who take initiative, are creative, proactive, and willing to go the extra mile. This requires having vigorous employees who are dedicated and absorbed by their work; that is, employees who are engaged (Bakker & Schaufeli, 2008).

To foster and facilitate employee engagement, organizations depend on knowledge of what drives work engagement. While job resources are considered the most important predictors of work engagement (Bakker, Demerouti, & Sanz-Vergel, 2014), few studies have considered a broader contextual factor measured at a higher organizational level in the prediction of work engagement (Bakker, Albrecht, & Leiter, 2011). This paper takes a closer look at how the organizational context influences work engagement, with the aim to further our understanding of the broader organizational factors that impact on work engagement. Accordingly, this paper will approach organizational culture as a direct higher-level predictor of work engagement, where the relationship between different culture types and employee engagement is investigated. More specifically, organizational culture and work engagement are investigated under the assumption that different culture types have differing effects on the work engagement of employees.

While the concept of organizational culture has received great attention from scholars, attention has been confined to investigating performance outcomes at the organizational level (Denison & Mishra, 1995). Only a moderate amount of empirical investigations have focused on phenomena such as the relationship between organizational culture and employee level outcomes (see Denison & Mishra, 1995; Glisson & James, 2002; Hartnell, Ou, & Angelo, 2011; Lok & Crawford, 2001; Sheridan, 1992). Thus, although organizational culture is believed to influence both organizational, group and individual constructs, research trying to identify the employee behaviors and attitudes affected by organizational culture is limited. Similarly, the work engagement research literature calls for investigating broader contextual factors that impact on work engagement (Bakker et al., 2011). Thus, there are two complimentary and concurrent research avenues that deserve further attention.

This paper considers the four organizational types within the Competing Values Framework (CVF) forwarded by Quinn and Rohrbaugh (1983), in order to investigate the cultures' relationship with work engagement. The CVF is one of the most widely used culture frameworks, and is applied here because of its simple structure and logic differentiation between distinct culture types. A multilevel framework is applied in a model where culture is featured as a contextual variable measured at the organizational level, while work engagement is featured as an individual level construct measured at the employee level.

In summary, the present study contributes to research and literature in three ways. First, a new avenue of research is explored where a broader contextual organizational variable is considered as a direct influencing factor on work engagement. Thus far, this has not been empirically investigated, and will contribute to moving the study of work engagement to a higher level in the organizational context. Second, knowledge on organizational culture's relationship with employee level outcomes is extended. Third, a multilevel approach is used to allow for studying the interaction between a variable characterizing individuals and variables characterizing groups. Thus, this paper contributes to a more appropriate and powerful approach to the study of a nested structure evident in organizational life.

This paper is divided into four sections: (1) a review of the work engagement construct, organizational culture literature, and a presentation of theoretically derived hypotheses (2) a description of the methodological procedure and statistical analyses, (3) a review of the analytical results, (4) a discussion of results, contributions, study limitations, recommendations for future research, and implications for practice.

## **Theory**

### **Work engagement**

In the last decades, research has witnessed a focus shift from the negative to the positive pole of workers' well being (Schaufeli, 2004; Seligman & Csikszentmihalyi, 2000). Within this trend the concept of *work engagement* has emerged as an antipode of burnout, considered to be "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Among scholars and practitioners an increased interest on the concept of employee engagement has developed (Bakker, Schaufeli, Leiter, & Taris, 2008; Crawford, LePine, & Rich, 2010), leading to a sharp increase in scientific studies on engagement (Bakker et al., 2011).

In proposing an conceptualization of the construct, theoretical analysis led researchers to identify *vigor*, *dedication* and *absorption* to be distinct aspects comprising the underlying dimensions of work engagement (Schaufeli et al., 2002). *Vigor* refers to the physical and mental activation of an employee. Vigor is characterized by being mentally resilient, being persistent, having high levels of energy and wanting to invest effort (Schaufeli et al., 2002). *Dedication* refers to strong involvement, and personal identification with ones job tasks. The dimension of dedication is characterized by experiencing significance, enthusiasm, inspiration, pride and challenge related to what one does at work (Bakker & Demerouti, 2008; Schaufeli et al., 2002). *Absorption*, the third dimension of work engagement, refers to being fully concentrated. The dimension of absorption is characterized by being deeply and happily engrossed in one's work, such that time passes quickly and one has difficulties detaching oneself from what one is doing at the moment (Bakker et al., 2011; Schaufeli et al., 2002).

Engagement is considered to be a persistent and pervasive state that is characterized by both its affective and cognitive elements as described through its three underlying dimensions (Schaufeli et al., 2002). This means that work engagement is not restricted to a specific event, object or individual, but facilitated through the physical, social and organizational environment (Bakker et al., 2011).

As research on work engagement has accumulated, it has been linked to positive consequences and outcomes within the context of work on both the individual and organizational level. For example, engagement has been found to be positively related to ratings of performance (Bakker & Bal, 2010; Bakker, Demerouti, & Verbeke, 2004), as well as being vital in the prediction of service climate, employee performance and customer loyalty (Salanova, Agut, & Peiró, 2005). More recently, engagement has been found to predict daily financial returns (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Accordingly, one would assume that an engaged workforce is a great asset for any organization.

**Drivers of work engagement.** Understanding what triggers employees to be engaged is essential for organizations to take measures in increasing employees' involvement, dedication, and ultimately their well being at work. To date, studies have focused on situational and personal factors, such as personal resources, job resources and job demands (Bakker & Demerouti, 2008). Few studies have considered a broader organizational factor such as culture. Including culture in the prediction of work engagement seems warranted, as it is fundamental to the study of organizations. Also, many researchers and practitioners regard organizational culture as an important determinant of behavioral and performance related

outcomes (Hartnell et al., 2011; Schneider, Ehrhart, & Macey, 2013). A brief background on drivers of work engagement can contribute to understand how culture as a broader contextual organizational factor can influence employees' engagement.

Recent studies have shown that work related resources are the most consistent and powerful drivers of work engagement (Bakker et al., 2011; Bakker et al., 2008). *Job resources* are situational factors, and refer to the physical, psychological, social or organizational aspects of the job that in some way are functional to the employee (Bakker & Demerouti, 2007). Examples of job resources are autonomy, innovativeness, appreciation, coaching, feedback, and personal and professional development (Bakker & Demerouti, 2007; Crawford et al., 2010; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job resources are functional in either achieving work goals, reducing job demands or stimulating growth, learning and development (Bakker & Demerouti, 2007). As such, they will instigate a motivational process where both extrinsic and intrinsic motivation is activated (Bakker & Demerouti, 2008).

Resources have been recognized for their motivational potential in several theories, such as the Job Characteristics Model (Hackman & Oldham, 1976), the Conservation of Resources Theory (Hobfoll & Freedy, 1993), and now the job demands-resources model (Demerouti et al., 2001). The job demands-resources model (JD-R) predicts that job resources will have a direct positive relationship with work engagement: "the presence of job resources leads to engagement, whereas their absence evokes a cynical attitude towards work" (Bakker & Demerouti, 2007, p. 314). Supporting this statement, a meta analysis by Halbesleben (2010) showed that the commonly studied resources of social support, autonomy, feedback and a positive organizational climate hold a significant and strong positive relationship with work engagement. Both self-report and observational analyses have provided support for the job demands-resources model (Bakker, Demerouti, Hakanen, & Xanthopoulou, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004).

Recently, a few investigations have taken advantage of multilevel frameworks in order to investigate higher-level precursors to conducive work environments preceding employee engagement. For example, Dollard and Bakker (2010) found support for the hypothesis that psychosocial safety climate had a positive effect on work engagement through its positive relationship with job resources. Tuckey, Bakker, and Dollard (2012) similarly found support for the hypothesis that the relationship between empowering leadership and follower engagement was partially mediated by resources. Additionally, a direct relationship was found between empowering leadership and follower engagement. Noting on the implications



of their findings, Tuckey et al. (2012) concluded: “Potential influences on work engagement also exist within the [...] wider organization.” (p. 22).

According to Bakker and Demerouti (2007), job resources are to be found at several organizational levels. At the individual level, you will find job resources such as skill variety, task identity or task significance. At the group level, interpersonal and social relations create job resources such as co-worker support. The management creates job resources through stimulating participation and sharing information. Last, the organization creates job resources through job security or career opportunities. Thus, we look at job resources as something that is external to the employee; a situational factor that is to be found in the broader organizational context. As job resources are considered significant predictors of work engagement, understanding what explanatory factor accounts for the variances in resource presence and availability is fundamental. This way, the variances in level of engagement expressed by the workforce can be explained for at a higher contextual level. As Hobfoll (2001) states “Resources are not individually determined, but are both transcultural and products of any given culture.” (p. 341). Expecting that culture will precede contextual resources and ultimately working conditions, organizational culture becomes relevant to consider in the prediction of work engagement. In effect, organizational culture will work as a purposeful variable in setting the criteria for variances in resource availability between organizations, thus impacting to what extent employees are engaged at work.

### **Organizational culture**

According to Hobfoll (2001) individuals’ actions and cognitions are guided by the availability of resources and the constraints of a culture. Thus, behavior and attitudes become a product of the shared values, beliefs and norms – that is, the organizational culture of a firm (Deshpandé & Webster, 1989; Hobfoll, 2001). Looking at organizational culture as a contextual variable, some organizations provide their employees with more resources than others, depending on the characteristics or type of the existent culture. To illustrate this: engagement research considers support, appreciation and opportunities for being innovative to be job resources (see Bakker et al., 2007; Crawford et al., 2010). As such, when an organizational culture is perceived as supportive, appreciative, and innovative, in essence the organizational culture is offering a fair amount of resources. Employees will likely interpret the work environment accordingly. In turn, they are more likely to respond by dedicating their effort and abilities, investing time and energy, and be psychologically connected and involved in their work and organization (Bakker et al., 2011; Bakker & Demerouti, 2007). Ultimately, the organizational culture of a firm can by itself have the ability of foster the work

engagement of employees. A brief introduction to the culture literature, and a description of a culture framework will be useful in understanding the connection between organizational culture and work engagement more clearly.

For most definitions of organizational culture a common denominator is the idea of culture being something that is *shared* among organizational members (Schneider et al., 2013). Similarly, Denison, Nieminen, and Kotrba (2012) argue that nearly all organizational scholars agree that the shared values, beliefs, and assumptions guiding behavior of organizational members are key elements of any culture definition. Thus, organizational culture is said to represent a higher level unit, and must be studied accordingly (Hartnell et al., 2011). Although the construct of organizational culture has been used to describe a variety of organizational phenomena, debate surrounding the construct still remains; especially regarding its content, and regarding methods to be applied (Schneider et al., 2013). Nonetheless, the construct of organizational culture has grown to be used as an explanatory factor for understanding and describing social and organizational life and phenomena (Denison, 1996; Schneider et al., 2013). As Hartnell et al. (2011) acknowledges, the motivation behind much of culture research is that organizational culture has been reckoned to influence behavior and attitudes at the organizational, group, and individual level. Looking further at how organizational culture can serve as explanatory factor for employees' work engagement, the Competing Values Framework (CVF) provides a useful taxonomy.

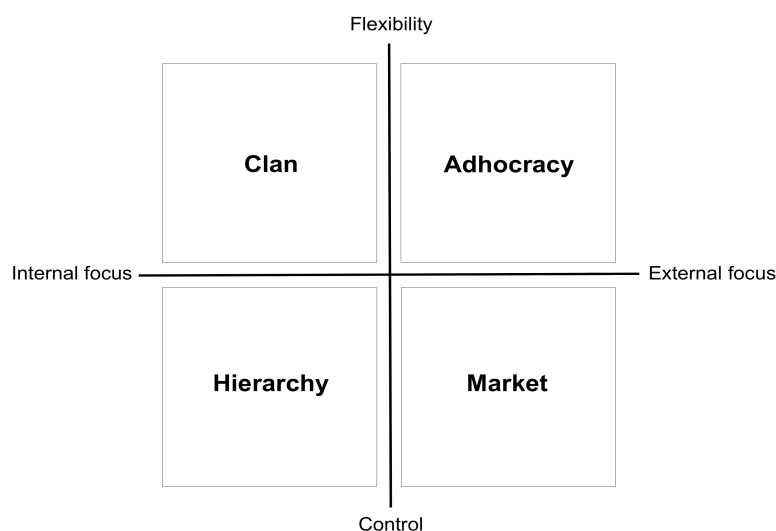
**The competing values framework.** Originally introduced by Quinn and Rohrbaugh (1983) as a framework for organizational analysis, the CVF taxonomy has become one of the most influential models of organizational culture (Cameron & Quinn, 2006). The CVF is a widely used instrument in both research and practice, and is chosen because it is useful in organizing and distinguishing between distinct culture types (Cameron & Quinn, 2006; Hartnell et al., 2011). Thus, its cultural typologies serve as a purposeful organizing framework for understanding how different organizational culture types can impact on employee engagement.

Quinn and Rohrbaugh's (1983) investigation revealed two main dimensions of effectiveness criteria, labeled *focus* and *structure*. The *focus* dimension represents the contrasting preference for flexibility versus stability. One end of the axis represents flexibility, spontaneity, and change, whereas the other end of the axis represents stability, order and control (Denison & Spreitzer, 1991). The *structure* dimension represents the contrast between internal organizational demands versus external environmental demands. Here, one end of the axis is oriented towards integration and unity, whereas the other end of

the axis is oriented towards differentiation and rivalry (Denison & Spreitzer, 1991).

According to the competing values framework, cultures of organizations differ with respect to the two sets of opposite values of *focus* and *structure*, ranging from internal to external, and from flexibility to stability respectively (Cameron & Quinn, 2006). Combining these two sets of competing values result in four unique culture types as depicted in Figure 1.

With an internal focus and emphasis on control, *hierarchy cultures* are to be found in workplaces where formalized and structured procedures set the guideline for what people do (Cameron & Quinn, 2006). In hierarchy cultures, rules and policies are said to hold the organization together, so that stability and predictability will foster efficiency (Hartnell et al., 2011). *Clan cultures* emphasize flexibility with an internal focus. Teamwork and employee development, as well as participation and empowerment of employees hold the organization together, while concern for people is part of defining success (Quinn & Kimberly, 1984). *Adhocracy cultures* have an external focus, supported by a flexible organizational structure. In adhocracy cultures emphasis is put on individuality and innovation, so that the organizations becomes a dynamic and creative place to work (Cameron & Quinn, 2006). Last, *market cultures* emphasize stability and control with an external focus. Market cultures are result-oriented, and hold the organization together by focusing on productivity, profits, and on winning (Quinn & Kimberly, 1984).



*Figure 1.* The competing values framework (adapted from Figure 3.1 in Cameron & Quinn, 2006, p. 35).

The four culture types can be clearly distinguished through their placement in the CVF framework. While organizations usually inhabit characteristics of several culture types, Cameron and Quinn (2006) argue that most organizations develop a dominant culture style; meaning that an organization usually can be described through one of the four culture types.

**Culture's relationship with employee attitudes and behaviors.** Organizational culture has been investigated in a variety of different settings in an effort to explore its many influences on organizational life. While the relationship between organizational culture and organizational effectiveness has been difficult to establish (Schneider et al., 2013), only a moderate amount of investigations have turned the focus to culture's relationship with employee attitudes and behavior (Odom, Boxx, & Dunn, 1990). As human capital is the most dynamic and invaluable resource of a firm, understanding what employee behaviors and attitudes are affected by the organizational environment is critical.

Employee perceptions of the organizational environment has been linked to several constructs. One of them is job involvement. Job involvement, similar to work engagement, characterizes an employee who is intrinsically motivated, and who is committed to their work (Hallberg & Schaufeli, 2006). In their investigation, Brown and Leigh (1996) found that a work environment perceived to be safe, supportive, and meaningful was related to greater job involvement, exerted work effort, and commitment of time and energy towards the organization. When employees were given support, it facilitated their experienced meaningfulness, roles became more clear, and work was perceived challenging (Brown & Leigh, 1996). Thus, the contextual surroundings at work seem to have a significant effect on employees' attitudes and in what way they are connected to their work.

Other researchers have similarly investigated constructs related to employees' experiences of the cultural context. In their meta analysis, Hartnell et al. (2011) found that organizational culture was significantly related to job satisfaction. The relationship depended on type of culture, with clan cultures having a significantly stronger relationship with job satisfaction than other culture types. In addition organizational culture was related to organizational commitment, again with clan cultures having the strongest positive relationship (Hartnell et al., 2011). These findings were also supported by Odom et al. (1990) when concluding that higher levels of commitment, satisfaction and cohesion amongst employees is attained by providing a cultural context that is people oriented and supportive, such as clan cultures. Similarly, Goodman et al. (2001) found that clan culture values were positively related to organizational commitment, job involvement, empowerment and job satisfaction. Clan cultures have also been found to have a significant positive relationship with affective

commitment, whereas hierarchical cultures have been found to be negatively related to affective commitment (Richard, McMillan-Capehart, Bhuian, & Taylor, 2009). Additionally, Sheridan (1992) found that organizational cultures emphasizing interpersonal relationships had lower retention rates than organizational cultures emphasizing work task values. He also estimated that the cultural effects resulted in a cost difference of over six million dollars (Sheridan, 1992). In sum, research on organizational culture and its relationship with employee outcomes show that some cultures are more conducive to facilitating positive employee attitudes and behavior such as involvement, commitment and satisfaction than others. This lends support to the assumption that organizational culture also has the potential to influence a construct such as employee engagement.

### **The culture-engagement link**

Given an organization's culture ability to impact on employee-related variables, the aim of the present study is to investigate such a link; more specifically, the link between organizational culture and work engagement. Considering a broader organizational factor in the prediction of work engagement has not received special attention in the past, and is therefore timely put on the agenda. It is of special interest in this paper to investigate the effects of four different culture types on work engagement. Based on the assumption that culture precedes resources and ultimately working conditions by creating a particular work environment, different cultures types will have differing effects on work engagement. Accordingly, the hypotheses are based on the proposition that some culture types will have a positive relationship with work engagement, whereas other culture types will have a negative relationship with work engagement. For the purpose of this investigation, the original CVF taxonomy is used to differentiate between distinct culture types and ground predictions. Complimentary theory and research is also applied to boost support for the hypotheses.

Some of the central characteristics of clan cultures are their focus on employee development, teamwork and collaboration, as well as trust in and commitment to employees (Cameron & Quinn, 2006). Support, empowerment, and participation is key, therefore focus is put on fostering membership, affiliation, attachment and feelings of belongingness (Quinn & Kimberly, 1984). This focus is then thought to facilitate positive behaviors and attitudes, such as employee involvement, commitment to the organization and open communication (Hartnell et al., 2011). In addition, focus is put on decentralized decision-making, participation and getting everyone on-board through appropriate information, so that employees build trust and long term commitment towards the organization (Quinn & Kimberly, 1984). Within the work engagement research literature, positive relationships

between engagement and characteristics of clan culture have been found, such as appreciation, supervisor and coworker support, and information. For example, Bakker et al. (2007) found that the job resources of supervisor support, appreciation and information sharing had significant positive relationships with the three dimensions of work engagement. Similarly, Crawford et al. (2010) concluded that the combined effects of several job resources, including access to information, and support from coworkers, supervisors and the organization, had significant positive relationships with work engagement. Ultimately, the focus in clan cultures is to provide job resources to employees, as the presence and availability of job resources is clearly evident in their values, focus and orientation. In effect, the clan culture inherently provides employees with several important job resources, which in turn will facilitate work engagement. In consequence, I propose:

*Hypothesis 1: Clan cultures are positively related to work engagement.*

Central characteristics of adhocracy cultures include innovativeness, fostering creativity, autonomy, variety, and making work challenging and stimulating (Cameron & Quinn, 2006). It is thought that such emphasis will facilitate the growth, development, and skill- and task variety of employees (Hartnell et al., 2011). Some of the characteristics of adhocracy culture are simultaneously considered job resources in the work engagement research literature. For example, providing employees with opportunities for being autonomous, innovative, as well as engaging employees in a variety of tasks and facilitating personal and professional development have been found to have positive relationship with work engagement. For example, Hackman and Oldham (1976) considered both skill variety and autonomy to be motivating resources, and these job characteristics have been found to have a significant positive relationship with work engagement (Saks, 2006). Similarly, innovativeness and opportunities for development have been found to be important resources linked to the three dimensions of work engagement (Bakker et al., 2007; Crawford et al., 2010). Consequently, the presence and availability of job resources in adhocracy cultures is apparent. Ultimately, the values, orientation and primary concerns in adhocracy cultures focus on providing employees with resources. In effect, the adhocracy culture can be used as a higher-level explanatory factor in the prediction of work engagement. Accordingly, I hypothesize:

*Hypothesis 2: Adhocracy cultures are positively related to work engagement.*

In contrast, characteristics of hierarchy cultures include structure, routines, a strong focus on efficiency, and having formal rules, policies and procedures that govern what employees do (Cameron & Quinn, 2006). Hierarchy cultures value precise communication, clear roles, and routinization, and do so within control mechanisms that facilitate conformity and predictability (Hartnell et al., 2011). While job resources such as clear roles and communication are to be found in hierarchy cultures, the hierarchy culture type is primarily concerned with focusing on control, routines and surveillance. As such, behavior and attitudes are ultimately believed to be a result of formalized rules and regulations (Quinn & Kimberly, 1984). Interpreting characteristics of hierarchy cultures, a restrictive emphasis on efficiency and consistency, surveillance, as well as formalization of procedures may stand to the risk of being interpreted as negative aspects of the job, not conducive of work engagement. For example, surveillance may be perceived as emotionally demanding to the employee, whereas strict control, policies and rules may lead to a lack of autonomy. With efficiency and uniformity as value drives, it is likely that employees in hierarchy culture will feel obligated to work hard, which in turn can be psychologically and physically demanding to employees in the long run. In effect, hierarchy cultures only provide employees with a limited set of positive and functional job resources. Consequently, the predominant focus on stability and control in hierarchy cultures will limit the presence and availability of job resources, and consequently the hierarchy culture will not be conducive of work engagement. Therefore, I hypothesize:

*Hypothesis 3: Hierarchy cultures are negatively related to work engagement.*

Market cultures are characterized by valuing competitiveness and aggressiveness, being result-oriented and achievement-oriented, maintaining control through rules, and centralizing decision-making where you will find managers who are tough and demanding (Cameron & Quinn, 2006). Market cultures value clear goals and communication in order to motivate aggressive performance (Hartnell et al., 2011). In addition, rewards are made contingent on achievement, decisions are made at the core, managers are directive, and meeting stakeholders' expectations is central (Quinn & Kimberly, 1984). Job resources are present in market cultures, such as clear goals and communication. In conflict, characteristics such as aggressiveness, an exclusive achievement focus, and contingent rewards may stand to the risk of being interpreted as negative aspects of the job. For example, making rewards

contingent only on achievement may limit personal development, and lead to a lack of proper feedback, whereas the expression of aggressiveness may be experienced as emotionally demanding to the employee. Interpreting the characteristics of market cultures, the orientation towards aggressively competing may lead employees in market cultures to experience high work pressure, which in turn can be psychologically and physically demanding. Ultimately, market cultures provide employees only with a limited set of positive and functional job resources. With a culture predominantly focused on winning through stimulating employees' competitiveness and aggressiveness, the presence and availability of job resources is restricted, and consequently market cultures will not be conducive of work engagement. Therefore, I hypothesize:

*Hypothesis 4: Market cultures are negatively related to work engagement.*

## **Method**

### **Sample and procedure**

Data for this study were gathered and used in a team of three master students, all under the supervision of an associate professor. The sample of organizations was selected on the basis of compiling a sufficiently heterogeneous sample regarding the independent variable, size and industry. Two questionnaires were created. One questionnaire was to be completed by an HR-representative and one to be completed by a group of employees in the organization. As such, organizational culture was assessed on the organizational level while work engagement was assessed on the employee level.

After a first introductory email, HR-representatives and managers from several small and large companies received an information letter explaining the background and purpose of the studies, as well as information about confidentiality, anonymity and participant rights. Following, an email with URL-links to online questionnaires was sent. The two questionnaires were sent out to each participating company with appropriate instructions. Each participating company was asked to recruit a minimum of 10 employees, and a maximum of 50 employees to fill in the employee-questionnaire. Completion time for the questionnaires was approximately 15-20 minutes. Two weeks after sending out questionnaires, reminder emails were sent.

In total, 183 companies were contacted. 35 companies accepted the invitation to participate, giving a response rate of 19 %. Of the 183 companies who were contacted, 84 did not reply. Out of those who replied, 55 % accepted the invitation to participate. A total of 35



HR-representatives and 463 employees completed the questionnaires. The number of employees participating within each organization ranged from 1 to 227, with an average of 13,23 employees ( $SD=37,58$ ). The response rate on the employee level was 30.1%.

Organizations included in the study vary in size, industry and according to sector. Both private (69%) and public sectors (31%) are represented, including knowledge incentive organizations (43%), organizations within the manufacturing industry (8,5%), wholesale industry (8,5%), retail (34%), and other service related industries (6%). The employee sample includes 230 females (49,7%) and 233 males (50,3%). Employees' age ranged from 19-65 years, with an average of 39 years ( $SD=10,98$ ). The majority of the sample ( $n=350$ ) had an educational degree at the collage or university level (75,6%). Organizational tenure ranged from less than a year to 39 years, with an average of 5 years and 3 months ( $SD=6,41$ ).

### Measures

Work engagement was assessed using the original 17 items version of the Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2002). A translated Norwegian version of the UWES was used after making changes to better fit the Norwegian language (see Schaufeli & Bakker, 2003). The 17 engagement items reflect a three-factor structure, including: *Vigor* (6 item, e.g., "When I get up in the morning, I feel like going to work") *Dedication* (5 items, e.g., "To me, my job is challenging") and *Absorption* (6 items, e.g., "When I'm working, I forget everything around me"). All 17 items are scored on a 7-point frequency rating scale ranging from 0 ("Never") to 6 ("Always"). Scores on each of the three subscales were summed to retrieve an individual score of the three underlying dimensions of work engagement. High scores on vigor, dedication, and absorption were indicative of work engagement. Internal consistencies (Cronbach's alpha) for the vigor, dedication, and absorption scales were .91, .91, and .90 respectively.

Organizational cultures were assessed with The Organizational Culture Assessment Instrument (OCAI) developed by Cameron and Quinn (2006). A translated version of the OCAI was used after making changes to better fit the Norwegian language (see Cameron & Quinn, 2013). The OCAI is divided into six dimensions labeled *Dominant Characteristics*, *Organizational Leadership*, *Management of Employees*, *Organizational Glue*, *Strategic Emphases*, and *Criteria of Success*. Four items are presented within each dimension, where each item is representative of one of the four culture scales. As such, the OCAI incorporates a scale for measuring clan culture (e.g. "The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves"), adhocracy culture (e.g. "The leadership in the organization is generally considered to exemplify entrepreneurship,

innovation, or risk taking”), market culture (e.g. The management style in the organization is characterized by hard-driving competitiveness, high demands, and achievement”), and hierarchy culture (e.g. “The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important”), each comprised of six items. The OCAI is scored by instructing respondents to judge the degree of fit between their organization and each of the in total 24 items. Respondents are asked to do this by dividing 100 points among the four items presented in each of the six dimensions, depending on the extent to which the item is representative of their own organization. The item that is most similar to the respondents’ organization is given a higher number of points, while the alternative that is the least familiar to the respondents’ organization is given a lower number of points. As such, the OCAI requires simple arithmetic calculations on behalf of the respondents. Scores on the six items representing a specific culture were then added up across the six dimensions, such that each organization received a summated score on each of the four culture scales. Internal consistencies (Cronbach’s alpha) for the clan culture scale was .82, for the adhocracy culture scale .75, for the market culture scale .87, and for the hierarchy culture scale .84.

Control variables included in the analyses are the employee’s gender (male/female) and tenure within the particular organization (years), measured at the employee level. Additionally, organizational size (number of employees) as measured on the organizational level was included as a control variable.

### **Statistical analyses**

The data obtained from the questionnaires resulted in two separate datasets. All datasets were exported directly from the electronic survey. One dataset consisted of data from the questionnaire version filled in by an HR-representative, and the other dataset consisted of data from the questionnaire version filled in by the employees. The datasets were merged into one file, and sorted by a coded firm number in order to conduct the analysis on groups of organizations. All items included in the surveys were mandatory, such that missing values were not a problem. Even so, the survey did not control for invalid input. Both datasets were therefore thoroughly screened.

The Level 1 dataset contained three cases with invalid input on the control variable “tenure”, and eleven cases with invalid input on the control variable “age”. Invalid data input was replaced using the Expectation-Maximization method (EM). First, Little’s Missing Completely at Random (MCAR) test was performed in order to test the hypothesis of whether the values were missing at random. As the test turned out to be non significant for both

variables, the missing values were replaced using the EM method. The Level 2 dataset was also screened for errors. The Level 2 dataset contained some typing errors due to the particular response format of the OCAI. In very few cases the total score on the culture dimensions did not add up to 100. In one extreme case, the scores on the six culture dimensions added up to values between 300 and 400. In this particular case, scores were adjusted in a logical sequence that considered the ratio of the relationship between the total score on the dimension (e.g. 300) and the expected total score on the dimension (i.e. 100). The datasets were further processed with SPSS 20. Items were renamed and scales were computed. Means and standard deviations were calculated for key variables.

Before conducting the analyses to test the hypothesized relationships, all predictors were centered. Centering of the predictors increases the interpretability of the intercept in the models (Hox, 2010). Grand mean centering was applied, and executed by subtracting the grand mean of each independent variable from the values of each independent variable. As such, the four independent variables all had a mean around zero.

In order to test the relationship between organizational culture and work engagement, multilevel modeling was chosen as the appropriate method. Multilevel modeling is conceptualized as a series of equations considering different levels of data, and allows for analyzing nested data structure (Hox, 2010). In the present study the data had two levels: employees (Level 1) nested in organizations (Level 2), where work engagement was measured on Level 1 while organizational culture was measured on Level 2. As such, data in this study included a multistage sample from a hierarchical system, where variables that characterize the group and variables that characterize the individual were considered. Using multilevel modeling decreases the chances of making a Type I error as the method is able to take clustered data into consideration (Hox, 2010). Additionally, common methods bias is avoided by using multilevel modeling.

The multilevel analysis was conducted in a sequence of four steps for each of the three dependent variables, following the bottom-up procedure recommended by Hox (2010). In the first step, a model without predictors was computed in order to retrieve the intercept-only model. In the second step, employee tenure, employee gender and organizational size were computed in order to examine the control variables' effects on the dependent variable. Considering the high intercorrelations between the independent variables (see Table 2), the four culture types were computed in two separate steps. In the third step, the independent variables of clan culture and adhocracy culture were entered. In the fourth step, the independent variables of hierarchy culture and market culture were entered. In each step, the

estimates and standard error, significance of parameters, and residual error of distinct levels were inspected. Computing the variables in the sequence described above is advantageous for calculating the proportion of explained variance resulting from adding variables at the different levels. The explained variance is calculated for both the employee level and for the organizational level, as well as for the total.

In the present study, three measures of work engagement were used as dependent variables, including the dimensions of vigor, dedication and absorption. Four independent variables were used; clan culture, adhocracy culture, hierarchy culture and market culture. Additionally, gender, tenure and organizational size were included as control variables.

## **Results**

### **Descriptive statistics**

Tables 1 and 2 present descriptive statistics for employee level variables (Level 1) and organizational level variables (Level 2). Descriptive statistics are presented separately for the Level 1 and Level 2 variables in order to avoid aggregation and disaggregation of the variables. Mean values (M) and standard deviations (SD) are included, as well as correlations between variables, and estimates of internal consistency (Cronbach's alpha).

Internal consistencies (Cronbach's alpha) for the engagement scales were .91, .91 and .90 for vigor, dedication and absorption respectively (Table 1). The culture scales had reliabilities ranging from .75 to .87 (Table 2). According to DeVellis (2003), reliabilities within the range of .70 and .80 are considered respectable, while reliabilities within the range of .80 and .90 are considered very good. Accordingly, all engagement scales have reliabilities that are considered very good. The clan culture scale, hierarchy culture scale, and market culture scale with alphas of .82, .84, and .87 respectively, are also considered very good. Last, the adhocracy culture scale with an alpha of .75 is considered respectable. All engagement scales had high means, indicating that participants gave high scores on all variables of work engagement (Table 1). The clan-, adhocracy-, hierarchy- and market culture scale all had a mean close to 25 (Table 2). According to Cameron and Quinn (2006), an even score among the four culture types indicates that organizations emphasize the four culture types nearly equally. In some cases, intercorrelations between independent variables were high (Table 2). Especially clan culture and hierarchy culture ( $r = -.72, p < .01$ ), as well as market culture and adhocracy culture were highly correlated ( $r = -.52, p < .01$ ). As there is no multicollinearity test in multilevel analysis, two separate models were computed when analyzing the effects of the independent variables (as described above) to deal with potential multicollinearity.

Table 1

*Descriptive Statistics, Internal Consistency Reliabilities, and Correlations for Level 1 Variables (Employees)*

Variable	M	SD	1	2	3	4	5
<b>Control variables</b>							
1. Gender (1 = female, 2 = male)	-	-	-				
2. Tenure	5.26	6.41	-.07	-			
<b>Employee level (Level 1)</b>							
3. Vigor	5.50	1.17	-.04	.06	(.91)		
4. Dedication	5.59	1.26	-.06	.07	.82**	(.91)	
5. Absorption	5.31	1.25	-.10*	.06	.84**	.83**	(.90)

Note: N = 463. Scale reliability (Cronbach's Alpha) in brackets on the diagonal.

\*  $p < .05$ . \*\*  $p < .01$ .

Table 2

*Descriptive Statistics, Internal Consistency Reliabilities, and Correlations for Level 2 Variables (Organization)*

Variable	M	SD	1	2	3	4	5
<b>Control variable</b>							
1. Organizational size	820.60	3375.23	-				
<b>Organizational level (Level 2)</b>							
2. Clan culture	33.78	12.37	-.13	(.82)			
3. Adhocracy culture	19.25	8.23	-.19	.14	(.75)		
4. Hierarchy Culture	25.38	13.84	.05	-.72**	-.30	(.84)	
5. Market culture	21.59	11.13	.22	-.32	-.52**	-.23	(.87)

Note: N = 35. Scale reliability (Cronbach's Alpha) in brackets on the diagonal.

\*\*  $p < .01$ .

## Multilevel analysis

In tables 3, 4 and 5 the results of the multilevel analysis are shown. Table 3 presents the results of models including vigor as the dependent variable. In Table 4 the results of the different culture types' effects on dedication are shown. Last, Table 5 presents the models computed for the engagement dimension of absorption. Standardized estimates for the independent variables are presented in the last column of the tables for the purpose of facilitating proper interpretations when comparing effects of the independent variables in the sample. In order to compare the fit of the models presented, Akaike's Information Criterion (AIC) was used as a general fit index. According to Hox (2010), a decrease in the AIC from one model to the next is indicative of better fit.

Hypothesis 1 predicted that the clan culture type would have a positive relationship with work engagement. In line with the hypothesis, the clan culture type was positively related to all of the three dimensions of work engagement. Clan culture showed a significant relationship with dedication ( $\beta = .16, p < .10$ ), but none of the estimates in the cases of vigor ( $\beta = .14, p > .10$ ) and absorption ( $\beta = .11, p > .10$ ) were significant. Overall, the results partly support Hypothesis 1.

Hypothesis 2 investigated whether the adhocracy culture type would have a positive relationship with work engagement. Results show that the adhocracy culture type did not have a positive relationship with vigor ( $\beta = -.11, p > .10$ ), dedication ( $\beta = -.03, p > .10$ ) or absorption ( $\beta = .00, p > .10$ ), nor were they significant. As there were no significant effects of adhocracy culture on any of the dimensions of work engagement, Hypothesis 2 was not supported by the data.

Hypothesis 3 stated that the hierarchy culture type would have a negative relationship with work engagement. In line with the hypothesis, hierarchy culture type was negatively related to all of the three dimensions of work engagement, including vigor ( $\beta = -.03, p > .10$ ), dedication ( $\beta = -.10, p > .10$ ), and absorption ( $\beta = -.11, p > .10$ ). However, estimates of hierarchy culture's effects on three of the work engagement dimensions were not significant. Consequently, Hypothesis 3 was not supported by the data.

Hypothesis 4 proposed that the market culture type would have a negative relationship with work engagement. The market culture type was negatively related to vigor ( $\beta = -.04, p > .10$ ), dedication ( $\beta = -.08, p > .10$ ), and absorption ( $\beta = -.05, p > .10$ ). Although relationships were negative as hypothesized, the estimates showed no significant relationships with any of the three dimensions of work engagement. Thus, no support for Hypothesis 4 was found.

Table 3

*Multilevel Analysis Predicting Vigor*

	Model 1	Model 2	Model 3	Model 4	Standardized estimates for predictors
<b>Fixed Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Intercept	5.64 (.10)***	5.57 (.20)***	5.56 (.20)***	5.57 (.20)***	
<i>Control variables</i>					
Tenure		.01 (.01)	.01 (.01)	.01 (.01)	
Gender		-.01 (.11)	-.00 (.11)	-.01 (.11)	
Organizational size		.00 (.00)	.00 (.00)	-.00 (.11)†	
<i>Predictors</i>					
Clan culture			.01 (.01)		.14
Adhocracy culture			-.02 (.01)		-.11
Hierarchy culture				-.00 (.01)	-.03
Market culture				-.00 (.01)	-.04
<b>Random Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Variation between employees	1.26 (.09)***	1.26 (.08)***	1.25 (.08)***	1.25 (.08)***	
Variation between organizations	.13 (.07)*	.11 (.06)*	.11 (.06)*	.12 (.07)*	
AIC	1447	1450	1450	1453	

†p&lt;.10. \*p&lt;.05. \*\*\*p&lt;.001.

Table 4

*Multilevel Analysis Predicting Dedication*

	Model 1	Model 2	Model 3	Model 4	Standardized estimates for predictors
<b>Fixed Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Intercept	5.70 (.10)***	5.72 (.21)***	5.70 (0.21)***	5.71 (0.21)***	
<i>Control variables</i>					
Tenure		.01 (.01)	.01 (.01)	.01 (.01)	
Gender		-.08 (.12)	-.07 (.12)	-.08 (.12)	
Organizational size		.00 (.00)	.00 (.00)	.00 (.00)	
<i>Predictors</i>					
Clan culture			.02 (.01)†		.16†
Adhocracy culture			-.00 (.01)		-.03
Hierarchy culture				-.01 (.01)	-.10
Market culture				-.01 (.01)	-.08
<b>Random Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Variation between employees	1.49 (.10)***	1.49 (.10)***	1.47 (.10)***	1.48 (.10)***	
Variation between organizations	.13 (.08)†	.12 (.08)†	.12 (.07)*	.11 (.07)†	
AIC	1524	1526	1527	1528	

†p&lt;.10. \*p&lt;.05. \*\*\*p&lt;.001.



Table 5

*Multilevel Analysis Predicting Absorption*

	Model 1	Model 2	Model 3	Model 4	Standardized estimates for predictors
<b>Fixed Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Intercept	5.45 (.09)***	5.62 (.20)***	5.61 (.20)***	5.61 (.20)***	
<i>Control variables</i>					
Tenure		.01 (.01)	.01 (.01)	.01 (.01)	
Gender		-.20 (.12)	-.19 (.12)	-.20 (.12)†	
Organizational size		.00 (.00)	.00 (.00)†	.00 (.00)†	
<i>Predictors</i>					
Clan culture			.01 (.01)		.11
Adhocracy culture			-.00 (.01)		-.00
Hierarchy culture				-.01 (.01)	-.11
Market culture				-.00 (.00)	-.05
<b>Random Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	
Variation between employees	1.49 (.10)***	1.48 (.10)***	1.47 (.10)***	1.48 (.10)***	
Variation between organizations	.07 (.05)†	.06 (.05)†	.07 (.05)†	.04 (.05)	
AIC	1517	1517	1519	1519	

†p&lt;.10. \*\*\*p&lt;.001.

For all of the three dependent variables, Model 1 showed moderately significant unexplained variance between organizations, leaving little variance to be explained when adding the organizational level variable. For vigor, Model 1 showed that the unexplained variance between organizations was significant ( $p < .05$ ). The intraclass correlation (ICC), for vigor showed that 9% of the unexplained variation was at the organizational level. For dedication, Model 1 showed that the unexplained variance between organizations was minimally significant ( $p < .10$ ), and the ICC showed that 8% of the unexplained variation was at the organizational level. For absorption, Model 1 also showed that the unexplained variance between organizations was minimally significant ( $p < .10$ ). The ICC for absorption showed that 4.5% of the unexplained variance was at the organizational level.

As the predictors were computed in two separate models, there is no basis for comparing the fit of these two. Even so, the AIC did not decrease compared to the intercept-only model when introducing the predictors in Model 3 and Model 4. This implies that neither Model 3 nor Model 4 seem to have a better fit than the intercept-only model (Model 1). As all predictors were located at Level 2, only proportions of variance explained at Level 2 are relevant to inspect. For vigor, calculations showed that Model 3 explained 15% of the variation at Level 2, while Model 4 explained 8% of the variation at Level 2. For dedication, Model 3 explained 8% of the variation at Level 2, while Model 4 explained 15% of the variation at Level 2. Last for absorption, calculation showed that Model 3 did not explain any of the variation at Level 2, while Model 4 explained 43% of the variation at Level 2. Summarized, Model 3 and Model 4 explained up to 43 % of the variation at Level 2 for all of the dimensions of work engagement.

### **Discussion**

This investigation focused on a higher-level organizational predictor of work engagement, in an attempt to extend both work engagement and organizational culture literature. The work engagement literature contains only a handful of investigations focusing on higher-level drivers of work engagement. As such, this investigation adds to the line of inquiry trying to explore how engagement is affected by broader organizational factors. Similarly, the organizational culture literature contains investigations of only a limited selection of employee level outcomes. This investigation adds to the line of inquiry trying to explore in what ways employees are affected by the organizational culture present at their workplace. Accordingly, by investigating the relationship between specifically organizational

culture and work engagement, the aim of the present study was to advance our understanding of the broader organizational factors that impact on work engagement.

Two sources of information were used in the current investigation: employees and the organizations they belong to. Considering the hypothesis in light of the results, one hypothesis was partially supported by the data, while the other hypotheses were not supported by the data. More specifically, clan culture showed a partially significant positive relationship with work engagement. In contrast to the hypothesis, adhocracy culture did not show a significant positive relationship with work engagement. Both hierarchy culture and market culture showed a negative relationship with work engagement as hypothesized, but none of the relationships were statistically significant. Overall, the current investigation finds support for claiming that organizational culture has a limited direct effect on work engagement. Similarly, the effects of culture on the work engagement of employees seem to minimally differ depending on the type of organizational culture existent in a firm. The discussion will aim to shed light over different interpretations and explanations of the results.

Although the results of the current investigation did not support the majority of the hypothesized relationships, this paper contributes to both the work engagement and organizational culture literature in several ways. On an overall level, an important contribution of this investigation is the discussion of a relationship between two constructs that have previously not been theoretically merged or empirically explored. As such, this paper provides the first investigation of the relationship between organizational culture and work engagement. Although a limited number of previous studies have linked higher-level organizational variables to work engagement (see Dollard & Bakker, 2010; Tuckey et al., 2012), to date no investigation has discussed the relationship between specifically organizational culture and work engagement. Bakker et al. (2011) argue that “we need to pay more attention to the broader contextual organizational factors that impact on engagement” (p. 23). In line with this argument, the current paper represents one of the first leaps towards connecting a broader contextual organizational factor with work engagement. While the current investigation only provide partly significant results for one of the hypotheses, the theoretical discussion of how culture and engagement potentially are linked forms the basis for future attempts to connect these constructs.

The current investigation extends theory on facilitators of work engagement, and contributes to work engagement theory by showing that the clan culture type moderately predicts work engagement. In line with the partly significant results, previous investigations also suggest that higher-level variables have the power to influence work engagement (see

Dollard & Bakker, 2010; Tuckey et al., 2012). As the majority of the hypotheses in the current investigation were not supported, it seems relevant to compare the current paper to previous investigations on work engagement. Accordingly, one of the clear differences lies in how the hypothesized relationships are studied. Previous investigations on work engagement have included a mediating variable when examining the relationship between a higher-level organizational factor and work engagement. Thus, there is reason to believe that there is a significant relationship between the different culture types and work engagement, but that the relationships need to be explored through a more complex model that includes a mediator. If empirically explored as a mediated relationship, a higher-level organizational variable seems to have a powerful and significant relationship with work engagement.

The current investigation extends theory on cultures effects on individual level constructs, and contributes to culture theory by showing that the clan culture type and work engagement are moderately related. While the current investigation only found a partly significant relationship between clan culture and work engagement, previous investigations have found both direct and significant relationships between various culture types and employee attitudes and behaviors (see Goodman et al., 2001; Hartnell et al., 2011; Odom et al., 1990; Sheridan, 1992). On the one end is the possibility that the relationship between organizational culture and specifically work engagement is manifested differently than the relationship between organizational culture and other employee attitudes. On the other end is the possibility that methodological limitations associated with the current investigation have obscured results for the non-significant findings. If the first possibility is assumed, the relationship between organizational culture and work engagement should not be investigated assuming a direct relationship between the two constructs. If the second possibility is assumed, limitations associated with the current investigation should guide how future researchers approach the relationship between organizational culture and work engagement.

As the current investigation contrasts to both previous culture research and engagement research regarding methodology and empirical assumptions, there are several paths of explanations that can be discussed when considering why this study only obtained partly significant results.

First, there is reason to believe that including job resources in the statistical investigation would be advantageous for attaining a clearer picture of how different culture types and engagement are related. Acting as a mediating variable, job resources could give insight into the statistical variation of job resources between the different cultural contexts'. Job resources have previously been added as a mediating variable when predicting work

engagement. For example, Tuckey et al. (2012) examined the role of empowering leadership applying multilevel analysis on a model where job resources acted as a mediating variable. Similarly, Dollard and Bakker (2010) applied multilevel thinking when investigating the role of psychosocial safety climate in a model where job resources acted as a mediating variable. Similar to the current investigation, the higher-level predictor was assumed to precede working conditions by impacting to what extent job resources were available in the organizational context. While Tuckey et al. (2012) obtained measures of the predictor and outcome at different levels, Dollard and Bakker (2010) obtained measures of the predictor and outcome at the same level, before aggregating the predictor to a higher level. As such, there are clear differences in how the relationship between the higher-level variable and work engagement is studied. Although, Tuckey et al. (2012) also found a direct relationship between empowering leadership and work engagement, both investigations included job resources as a mediating variable explaining the significant relationship between the higher-level predictor and engagement.

Second, there is reason to believe that the relationship between an organization's culture and work engagement is more complex than assumed in this paper. According to Schneider et al. (2013) most research on organizational culture addresses a direct relationship between culture and some outcome variable, whereas theory usually forwards the assumptions of more complex relationships between such variables. In line with Schneider et al.'s (2013) observations, previous empirical investigations of organizational culture have forwarded a direct link between culture and employee attitudes or behaviors. Thus far, culture has been linked to constructs such as job involvement and empowerment (Goodman et al., 2001), job satisfaction (Hartnell et al., 2011), commitment (Odom et al., 1990), and retention (Sheridan, 1992). While research methods in these studies vary, they all have investigated and found support for a direct link between organizational culture and the employee level outcome. Thus, several researchers argue for significant relationships between culture and employee behaviors and attitudes. For example, Odom et al. (1990) argue that an important impact of organizational culture is its effect on employee level outcomes, such as behavior. Similarly, Richard et al. (2009) states that previous research indicates that organizational culture impacts on employee attitudes. While the above-cited studies found significant and direct relationships for all of the different culture types investigated, this paper only found a partly significant relationship for one of the culture types. Differing methodologies applied can be one of the reasons for this incongruence.

The main difference between above-cited investigations and the current study is the application of a multilevel model. Previous studies have mainly applied correlation analyses, analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA), and measured organizational culture as how it is experienced by the employee. This paper forwards a different view; because culture represents something that is shared among organizational members (Denison et al., 2012; Schneider et al., 2013), the operationalization of culture must be correct, namely representing something that exists at a higher organizational level (Chan, 1998; Hartnell et al., 2011). On the one end, by obtaining data for predictors and outcomes from different sources, i.e. applying multilevel methods, this paper avoids the fallacy of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2011). On the other end, this both conceptually and statistically puts the predictor and outcome further apart, compared to when obtaining data from the same source (Podsakoff et al., 2011). With reference to the mainly non-significant results, an interpretation could be that culture and engagement operate contextually too far apart to be studied in a multilevel framework that assumes a direct link. Following, the relationship between culture and engagement may be better conceptualized as a rather complex relationship between the organization and the employee.

Third, the CVF was chosen based on its influence and popularity in the literature, and because of its usefulness in organizing and distinguishing between distinct culture types (Cameron & Quinn, 2006; Hartnell et al., 2011). Although the CVF organizes culture characteristics into meaningful types, results show the culture types are highly intercorrelated, and exhibit weak relationships with the three dimensions of work engagement. The CVF is originally an organization theory, stemming from the disciplines of sociology and anthropology (Denison, 1996), whereas the engagement concept stems from the JD-R theory located within occupational health psychology (Bakker et al., 2008). A different interpretation of the results is that the concept of work engagement and the CVF are theoretically too far apart so that an empirical investigation such as the current will have difficulties in establishing significant findings. An advantageous alternative could be to consider climate as a higher-level precursor of work engagement. While the distinction between culture and climate has been debated for decades, Denison (1996) concluded that the difference between culture and climate lies in how one interprets the constructs rather than their actual phenomena. Similarly, Schneider et al. (2013) state that culture and climate are two alternatives for conceptualizing the way people describe and perceive their work settings, meaning they are overlapping perspectives. Thus, the constructs of culture and climate can be

said to be very much alike. What makes climate more appropriate is that the climate concept, similar to engagement, stems from the discipline of psychology (Denison, 1996), and should therefore be theoretically more closely linked. As such, an alternative framework for studying how the broader organizational context impacts on work engagement could be found in the climate literature.

### **Limitations and future research**

The findings presented in this paper need to be considered in light of limitations associated with the design and methodology of the investigation. Possible directions for future research are suggested.

Concerning the sample, several aspects need to be pointed out. First, the sample size is considered sufficient but not big (Maas & Hox, 2005). As a rule of thumb, Hox (2010) suggests to strive for 30 groups with 30 individuals per group, if the main interest lies in fixed effects. In the current investigation, the complete dataset consisted of 35 cases in the Level 2 sample, and 463 cases in the Level 1 sample. While the Level 2 sample is sufficient, the Level 1 sample includes an average of 13 ( $SD=37,58$ ) individuals per organization, which is below what is recommended. Additionally, as the standard deviation indicates, there was an unequal distribution of employees in the organizations; a consequence of one organization being fairly large in comparison to the other organizations included in the sample. As such, the sample was skewed and a lack of heterogeneity was evident. Overall the sample used in this investigation is neither perfect nor optimal, but is acceptable for the purpose of a master's thesis. Future research should strive for ensuring a larger sample size on the organizational level and a more evenly distributed sample at the employee level. Second, the study was conducted only on a Norwegian sample. Schneider et al. (2013) point out that national culture has an impact on organizational culture. Therefore, future research should consider examining the relationship between organizational culture and work engagement in a different country.

Another limitation is related to the OCAI and the measurement of organizational culture. First, the particular response format of the OCAI requires that the responder understands the rating instructions and is able to apply simple arithmetic calculations. In the current investigation, great effort was put into giving clear instructions to respondents. Still, in very few cases the total score on the culture dimensions did not add up to 100 points as was expected. Future research should make efforts to provide the responder with clear and proper instructions so that response errors are minimized. Second, considering that the responder has to rate each statement presented in the OCAI, good sense of the organizational culture is required. In the current investigation, an HR-representative was asked to fill in the OCAI,

under the assumption that the HR-department would have good knowledge of the culture present in a firm. On this note, organizational seniority may be a better premise when choosing a responder for the culture measures. This because, an individual with low tenure within an organization may not be familiar with the existent culture, making it difficult to weight the alternatives presented in the OCAI. The current research setting did not control for tenure of the employee filling in the culture scales. Future research should consider letting a long-tenured individual rate the OCAI to ensure that the response reflects the cultural profile of the organization.

Analyses revealed that the culture scales were highly correlated, especially clan culture and hierarchy culture, as well as adhocracy culture and market culture. In the case of multicollinearity, the explained variance is arbitrary distributed between predictors. Thus, the predictors were computed in two stages when analyzing the theorized model in order to avoid potential multicollinearity. Computing the predictors in two separate stages makes comparison of the models problematic. As such, interpretation of results must be considered in light of the high correlation between the different culture scales. Future research might avoid this by providing a different research setting and sample. Future research might also consider using a different culture framework, or in line with the discussion, consider introducing organizational climate as a higher-level precursor of work engagement.

In the current paper, organizational culture was addressed as a direct influencing factor on work engagement under the assumption that specific culture types are a precursor of a conducive work environment that facilitates engagement. However, only a direct link between organizational culture and work engagement was investigated. A limitation associated with the current investigation is that employees' experiences of their work environment were not included as a source of information. With reference to the discussion, there is reason to believe that the relationship between organizational culture and work engagement is more complex than assumed in this paper, where a mediated relationship between culture and engagement could explain variance between organizations. The relationship between organizational culture and work engagement needs to be further explored by using possible mediating variables, such that efforts are made in capturing the complexity of the relationship between the two constructs.

Last, for moving engagement research in a new direction, broader organizational variables need to be considered as predictors when exploring how the wider organizational context impacts on work engagement. Examples of such variables other than culture are amongst others leadership style, climate, and HRM-practices. When investigating phenomena



that include variables operating at different levels of the organization, future research should ensure to adopt multilevel approaches.

### **Implications for practice**

Although the present study only provided partly significant results for one of the hypothesized relationships, there are some implications for HR and management practice to be inferred from the results.

To foster and facilitate employee engagement, organizations depend on knowledge of what drives work engagement. This is especially relevant for HR and managers, as they often are responsible for initiatives directed towards creating work environments where employees are satisfied, dedicated, committed and contributors of organizational success (Goodman et al., 2001). Yet, in order for such initiatives to be successful in facilitating positive attitudes and behaviors, knowledge of what predicts these positive attitudes and behaviors is key. The current investigation suggests that initiatives directed towards increasing work engagement of employees do not guarantee success when focusing only on broader contextual variables such as culture. For example, initiatives directed towards adopting or developing a culture that has more clan-like characteristics, may only contribute minimally to facilitating and fostering work engagement. Ultimately, there is limited support for the assumption that specific culture types optimize working conditions for employee engagement. Rather, research to date indicates that job resources are the most important predictors of work engagement (Bakker et al., 2014). Thus, initiatives directed towards increasing the availability of resources will be more effective if HR or managers want to foster and facilitate employee engagement in their organization.

### **Conclusion**

This study is one of a very few studies to consider a higher-level variable as a predictor of work engagement; also it is the first to consider the relationship between specifically organizational culture types and work engagement. The present study was conducted on 35 Norwegian organizations within a variety of different sectors and industries. A multilevel approach was applied to test four hypothesized relationships. Results of the analyses provided partial support for one hypothesis, while three of the hypothesized relationships were not supported. More specifically, the analyses revealed that the clan culture type has a moderate relationship with work engagement, while adhocracy culture does not have a significant positive relationship with work engagement. Similarly, hierarchy culture and market culture did not have a significant negative relationship with work engagement. A

discussion of the results explored work engagement and organizational culture research, in order review different explanations for the results. Differing assumptions and methodological differences were especially relevant to point out. Additionally, the results of the current investigation need to be considered in light of study limitations. The current paper contributes to both work engagement theory and organizational culture theory, by showing that there is a moderate link between these two concepts. Future research is needed in order to shed light over the potential complex relationship between culture and engagement within an organization.

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